

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claims 1-22 (Canceled).

Claim 23 (Currently Amended): A programmer for a medical device comprising:

a first circuit board placed within a first housing member;

a second circuit board placed over the first circuit board;

a second housing member placed over the second circuit board to substantially enclose the first and second circuit boards;

a loading port accessible via the second housing member to load instructions into memory on one of the first and second circuit boards, wherein the second housing member defines an aperture to expose the loading port; and

a plate member placed within the second housing member and at least partially over the aperture to cover the loading port,

wherein the first housing member, the first circuit board, the second circuit board, the second housing member and the plate member are assembled in a stacked z-axis configuration.

Claim 24 (Original): The programmer of claim 23, further comprising one or more input buttons placed over the second circuit board prior to the second housing member being placed.

Claim 25 (Original): The programmer of claim 23, wherein the first circuit board, the second circuit board, the second housing member and the plate member are stacked in substantially vertical alignment with one another.

Claim 26 (Original): The programmer of claim 23, wherein the first circuit board includes telemetry circuitry and the second circuit board includes a display and display circuitry.

Claim 27 (Original): The programmer of claim 26, wherein the display is a liquid crystal display.

Claim 28 (Original): The programmer of claim 26, wherein the second circuit board includes control circuitry to drive the telemetry circuitry and the display circuitry.

Claim 29 (Original): The programmer of claim 28, wherein the control circuitry disables the display and the display circuitry during telemetry.

Claim 30 (Original): The programmer of claim 26, wherein the first circuit board comprises a bottom side substantially adjacent to the first housing member, the programmer further comprising an internal antenna mounted on the bottom side of the first circuit board and the internal antenna coupled to the telemetry circuitry.

Claim 31 (Original): The programmer of claim 30, wherein the internal antenna defines an aperture, the programmer further comprising a battery bay extending at least partially into the aperture.

Claim 32 (Original): The programmer of claim 31, wherein the first housing member includes a molded area that defines a battery bay adjacent the first circuit board.

Claim 33 (Original): The programmer of claim 32, further comprising an access opening in the first housing member to gain access to the battery bay for placement of batteries.

Claim 34 (Original): The programmer of claim 26, wherein the second circuit board comprises a top side substantially adjacent to the second housing member, wherein the display is mounted on the top side of the second circuit board and the display coupled to the display circuitry.

Claim 35 (Original): The programmer of claim 26, further comprising an external antenna coupled to the telemetry circuitry via a cable.

Claim 36 (Canceled).

Claim 37 (Original): The programmer of claim 23, wherein the loading port is a JTAG port.

Claim 38 (Original): The programmer of claim 23, wherein the instructions are selected based on one of a plurality of different functional sets desired for the programmer.

Claim 39 (Original): The programmer of claim 23, wherein the plate member includes a transparent portion sized to expose a display mounted on the second circuit board.

Claim 40 (Original): The programmer of claim 23, wherein the plate member is selected from one of a plurality of plate members having different configurations based on a match between the configuration of the plate member and a type of medical device programmer being assembled.

Claim 41 (Original): The programmer of claim 40, wherein the plate member is printed with information to identify the programmer type.

Claim 42 (Original): The programmer of claim 40, wherein the plate member configuration comprises a size, a shape, a printed graphic, and a number of apertures to accommodate input buttons extending outward from the programmer.

Claim 43 (Currently Amended): The programmer of claim 23, wherein the aperture that exposes the loading port comprises a first aperture, and wherein the second housing member includes a ~~first~~second aperture to expose a display mounted on the second housing member, ~~and a second aperture to expose the loading port.~~

Claim 44 (Original): The programmer of claim 23, further comprising a first electrical connector interface included on the first circuit board and a second electrical connector interface included on the second circuit board, wherein the first connector interface couples to the second connector interface to electrically connect the first circuit board to the second circuit board.

Claim 45 (Original): The programmer of claim 23, wherein the first housing member and the second housing member form an aperture for an infrared interface to receive changes to software executed by a processor within the programmer during an infrared communication session.

Claim 46 (Currently Amended): A programmer for a medical device comprising:
a first circuit board placed within a first housing member;
a second circuit board placed over the first circuit board;
a second housing member placed over the second circuit board to substantially enclose the first and second circuit boards;

a loading port accessible via the second housing member to load instructions into memory on one of the first and second circuit boards, wherein the second housing member defines an aperture to expose the loading port; and

a plate member placed within the second housing member and at least partially over the aperture to cover the loading port,

wherein the first housing member, the first circuit board, the second circuit board, the second housing member and the plate member are assembled in a stacked z-axis configuration, the z-axis extending in a direction substantially perpendicular to a major plane of the first circuit board.

Claim 47 (Previously Presented): The programmer of claim 46, further comprising one or more input buttons placed over the second circuit board prior to the second housing member being placed.

Claim 48 (Previously Presented): The programmer of claim 46, wherein the first circuit board, the second circuit board, the second housing member and the plate member are stacked in substantially vertical alignment with one another.

Claim 49 (Previously Presented): The programmer of claim 46, wherein the first circuit board includes telemetry circuitry and the second circuit board includes a display and display circuitry.

Claim 50 (Previously Presented): The programmer of claim 49, wherein the display is a liquid crystal display.

Claim 51 (Previously Presented): The programmer of claim 49, wherein the second circuit board includes control circuitry to drive the telemetry circuitry and the display circuitry.

Claim 52 (Previously Presented): The programmer of claim 51, wherein the control circuitry disables the display and the display circuitry during telemetry.

Claim 53 (Previously Presented): The programmer of claim 49, wherein the first circuit board comprises a bottom side substantially adjacent to the first housing member, the programmer further comprising an internal antenna mounted on the bottom side of the first circuit board and the internal antenna coupled to the telemetry circuitry.

Claim 54 (Previously Presented): The programmer of claim 53, wherein the internal antenna defines an aperture, the programmer further comprising a battery bay extending at least partially into the aperture.

Claim 55 (Previously Presented): The programmer of claim 54, wherein the first housing member includes a molded area that defines a battery bay adjacent the first circuit board.

Claim 56 (Previously Presented): The programmer of claim 55, further comprising an access opening in the first housing member to gain access to the battery bay for placement of batteries.

Claim 57 (Previously Presented): The programmer of claim 49, wherein the second circuit board comprises a top side substantially adjacent to the second housing member, wherein the display is mounted on the top side of the second circuit board and the display coupled to the display circuitry.

Claim 58 (Previously Presented): The programmer of claim 49, further comprising an external antenna coupled to the telemetry circuitry via a cable.

Claim 59 (Previously Presented): The programmer of claim 46, wherein the loading port is a JTAG port.

Claim 60 (Previously Presented): The programmer of claim 46, wherein the instructions are selected based on one of a plurality of different functional sets desired for the programmer.

Claim 61 (Previously Presented): The programmer of claim 46, wherein the plate member includes a transparent portion sized to expose a display mounted on the second circuit board.

Claim 62 (Previously Presented): The programmer of claim 46, wherein the plate member is selected from one of a plurality of plate members having different configurations based on a match between the configuration of the plate member and a type of medical device programmer being assembled.

Claim 63 (Previously Presented): The programmer of claim 62, wherein the plate member is printed with information to identify the programmer type.

Claim 64 (Previously Presented): The programmer of claim 62, wherein the plate member configuration comprises a size, a shape, a printed graphic, and a number of apertures to accommodate input buttons extending outward from the programmer.

Claim 65 (Currently Amended): The programmer of claim 46, wherein the aperture that exposes the loading port comprises a first aperture, and wherein the second housing member includes a ~~first~~second aperture to expose a display mounted on the second housing member, ~~and a second aperture to expose the loading port.~~

Claim 66 (Previously Presented): The programmer of claim 46, further comprising a first electrical connector interface included on the first circuit board and a second electrical connector interface included on the second circuit board, wherein the first connector interface couples to

the second connector interface to electrically connect the first circuit board to the second circuit board.

Claim 67 (Previously Presented): The programmer of claim 46, wherein the first housing member and the second housing member form an aperture for an infrared interface to receive changes to software executed by a processor within the programmer during an infrared communication session.

Claim 68 (New): The programmer of claim 23, wherein the first housing member and the second housing member form a housing unit that substantially encloses the first and second circuit boards.

Claim 69 (New): The programmer of claim 46, wherein the first housing member and the second housing member form a housing unit that substantially encloses the first and second circuit boards.

Claim 70 (New): A programmer for a medical device comprising:
a first circuit board placed within a first housing member;
a second circuit board placed over the first circuit board, wherein the first and second circuit boards occupy different planes;
a second housing member placed over the second circuit board, wherein the first and second housing members substantially enclose the first and second circuit boards;
a loading port accessible via the second housing member to load instructions into memory on one of the first and second circuit boards, wherein the second housing member defines an aperture to expose the loading port; and
a plate member placed within the second housing member to cover the loading port, wherein the first housing member, the first circuit board, the second circuit board, the second housing member and the plate member are assembled in a stacked z-axis configuration.

Claim 71 (New): The programmer of claim 70, wherein the first and second circuit boards are printed circuit boards.